CLAIMS

What is claimed is:

1. A wall system for installation between adjacent units, said wall system comprising:

one wall panel including a concrete portion adjoined to a foam portion,

a first stud embedded in the foam portion and a second stud embedded in the concrete portion .

2. The wall system of claim 1, further including a first fire-resistant sheet affixed to said first stud, said first fire-resistant sheet spaced from said foam portion and defining a first sound channel therebetween.

3. The wall system of claim 1, further including a spacer affixed to said second stud, a second fire-resistant sheet affixed to said spacer, said second fire-resistant sheet spaced from said concrete member and defining a second sound channel therebetween.

4. A wall system as recited in claim 1, wherein said wall panel further includes at least one support column extending generally parallel to said studs.

5. A wall system as recited in claim 4, wherein said at least one support column is a concrete column integral with said concrete member.

6. A wall system as recited in claim 5, wherein said at least one support column has a thickness greater than a thickness of said concrete member.

7. A wall system as recited in claim 6, further including at least one reinforcing bar embedded within said at least one support column.

8. A wall system as recited in claim 5, wherein said wall panel includes two support columns spaced apart one from the other.

9. A wall system as recited in claim 1, wherein said concrete member covers opposing side portions of said foam portion.

10. A wall system as recited in claim 1, wherein said first and second studs are sheet metal channels.

11. A wall system as recited in claim 3, wherein said second stud has a cap portion substantially flush with an exterior surface of said concrete member, said cap including walls defining an empty space for receiving a fastener.

12. A wall system as recited in claim 1, wherein said first stud is fabricated from a sheet metal channel and wherein said sheet metal channel includes a cap portion which lays substantially flush with an exterior surface of said concrete member, and further wherein said cap portion has a penetrable layer of material affixed to an inner surface thereof defining a space for receiving a fastener.

13. A wall system as recited in claim 2, wherein said first sound channel has a width between one-eighth inch and two inches.

14. A wall system as recited in claim 13, wherein said first sound channel has an approximate width of one-half inch.

15. A wall system as recited in claim 2, wherein said first and second fire resistant sheets are fabricated from gypsum.

16. A wall system as recited in claim 2, wherein said first and second fire resistant sheets are affixed to opposing sides of said wall panel.

17. A wall system as recited in claim 1, wherein said wall panels have a height greater than a width thereof.

18. A wall system as recited in claim 17, wherein said wall panels have a height range of approximately twenty nine feet to approximately fifty two feet and a width of approximately eight feet.

19. A wall system as recited in claim 9, wherein the portion of the concrete member which covers the side portions of the foam portions includes a tongue formed in a first edge thereof and a groove formed in a second edge thereof.

20. A wall system as recited in claim 9, wherein the portion of the concrete member which covers the side portions of the foam portions includes flat surfaces.

21. A wall panel for use in a wall between adjacent units of a multi-unit residential dwelling, said wall panel comprising:

a foam core having a first face and a second face;

a first structural stud partially embedded in said foam core and extending through a first face of said core;

a concrete member covering said second face of said foam core structural stud partially embedded in said concrete member and extending through a face of said concrete member.

22. A method of fabricating a wall panel for use in constructing a wall between adjacent units of a multi-unit residential dwelling, the wall panel of the type comprising a foam core, a plurality of structural studs partially embedded in a first face of the core and a plurality of structural studs partially embedded in a second face of the core, and a concrete member covering the second face of the core, said method comprising the steps of:

arranging the structural studs in a desired substantially parallel spaced relationship;

expanding a resinous foam in a manner to form a panel core and embed a portion of the studs in a first face of the core and a portion of the studs in a second face of the core, each stud having a cap extending outwardly of either the first or second face of the core;

pouring concrete over the second face of the core to form the concrete member to a thickness substantially equal to the extent of the outwardly extension of the stud from the second face of the core; and

curing the concrete member.

23. A method of fabricating a wall panel for use in constructing a wall between adjacent units of a multi-unit residential dwelling, the wall panel of the type including a foam panel coupled to a concrete panel, said method comprising the steps of:

casting said concrete panel and embedding at least one first stud partially within the concrete panel before it is cured, wherein said at least one first stud is partially visible from a first face of said concrete panel,

forming said foam panel on a second face of said concrete panel, said foam panel having a second stud partially embedded within the foam panel and partially exposed from a first face of the foam panel,

wherein said first face of the foam panel and the first face of the concrete member form opposite faces of said wall panel.

24. The method of claim 23, wherein the step of forming said foam panel step is carried out while the concrete panel is not yet fully cured.